IN THE CLAIMS

Please consider the following claims:

Claim 1 (currently amended): A method for modifying a plant to produce an antibody or an active fragment of an antibody showing the antigen binding activity of the antibody ~~or a protein functionally equivalent to the antibody showing the antigen binding activity of the antibody~~ in a cellular compartment, comprising introducing into a plant a DNA sequence encoding a heavy chain immunoglobulin devoid of a variable light chain domain, or an active fragment of said immunoglobulin said fragment being devoid of a variable light chain domain, ~~or a sequence encoding a protein functionally equivalent to the immunoglobulin,~~ said DNA sequence being operably linked to one or more promoters, and expressing the antibody or fragment ~~or protein functionally equivalent to the antibody~~, which are devoid of light chain domains but capable of specific binding with an antigen, in the cellular compartment.

Claim 2 (currently amended): The method according to claim 1 wherein the DNA sequence encoding the heavy chain immunoglobulin or fragment ~~or functional equivalent~~ thereof is obtainable from camelids.

Claim 3 (previously presented): The method according to claim 1 or claim 2 wherein the plant is selected from tobacco, pea, potato, spinach, tomato or tea.

Claim 4 (currently amended): The method according to claim 1 wherein the heavy chain immunoglobulin or active fragment ~~or functional equivalent~~ thereof binds to a protein present in the plant.

Claim 5 (currently amended): The method according to claim 1 wherein the heavy chain immunoglobulin or active fragment ~~or functional equivalent~~ thereof binds to a plant pathogen or animal pathogen.

Claim 6 (currently amended): The method according to claim 1 wherein the heavy chain immunoglobulin or active fragment ~~or functional equivalent~~ thereof binds to a plant hormone or plant metabolite.

Claim 7 (previously presented): A plant prepared according to the method of claim 1.

Claim 8 (withdrawn): A modified plant having, in a desired cellular compartment, enhanced levels of heavy chain immunoglobulins or active fragments or derivatives thereof or proteins functionally equivalent thereto compared to equivalent but unmodified plants.

Claim 9 (currently amended): Seeds, fruits, progeny and hybrids of the plant according to claim 7 which comprise said DNA sequence encoding a heavy chain immunoglobulin or active fragment thereof ~~or functional equivalent thereof~~.

Claim 10 (withdrawn): A food product comprising a plant according to claim 7 or 8.

Claim 11 (withdrawn): A method for increasing pathogen resistance in a plant comprising introducing into said plant a DNA sequence encoding a heavy chain immunoglobulin which binds to a plant or animal pathogen, or an active fragment or derivative thereof or one or more sequences encoding a protein functionally equivalent thereto, according to the method of claim 1.

Claim 12 (withdrawn): A method for modulating plant metabolism comprising introducing into said plant a DNA sequence encoding a heavy chain immunoglobulin which binds to a protein present in said plant or an active fragment or derivative thereof or one or more sequences encoding a protein functionally equivalent thereto according to the method of claim 1.

Claim 13 (withdrawn): A method for preparing a heavy chain immunoglobulin or an active fragment or derivative thereof comprising the steps of:

(i) modifying a plant according to the method of claim 1, and

(ii) extracting from said modified plant the heavy chain immunoglobulin or active fragment or derivative thereof produced therein.

Claim 14 (currently amended): The method according to claim 1 wherein said DNA sequence further comprises an additional sequence encoding a peptide sequence capable

of targeting said antibody or fragment ~~or functional equivalent~~ thereof, to said cellular compartment.